REMARKS

Applicant's remarks, below, are preceded by quotations of the related comments of the Examiner in small, bold-face type.

> **1. Figure 1-6 should be designated by a legend such as --Prior Art -- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.**

Substitute informal drawings for Figures 1-6 are enclosed.

> **3. Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (USPN 5,268,853), hereafter Tanaka.**
> **4. Regarding claims 1 and 8, Tanaka discloses a method/program for implementing a two-dimensional inverse discrete cosine transform, comprising: executing two one-dimensional inverse discrete cosine transforming functions, each of the functions being controlled to operate on a matrix of coefficients in either of two different directions (column 5, line 12-17).**

Tanaka does not teach or suggest "executing two one-dimensional inverse discrete cosine transforming functions, each of the functions being controlled to operate on a matrix of coefficients in either of two different directions" as in Applicant's claim 1. In Tanaka, the functions discussed at col. 5, lines 12-17 operate in only one direction, row or column, and not "in either of two different directions." There is no teaching or suggestion that the functions do or ever could otherwise operate.

For at least these reasons, Tanaka does not anticipate and would not have made obvious claim 1. Claim 8 includes limitations similar to claim 1 and is patentable for at least the same reason as for claim 1. Claims 2-7 and 9-14 depend on claims 1 and 8, respectively, and are patentable for at least the same reasons as for their respective independent claims.

> **5. Regarding claims 15 and 19, Tanaka discloses a method of implementing a two-dimensional inverse discrete cosine transform (column 5, line 12-17), comprising: executing a first one-dimensional inverse discrete cosine transforming function in a first direction on a first matrix of coefficients to produce a matrix of intermediate and executing a second one-dimensional inverse discrete cosine transforming function in a second,**

different direction on the matrix of intermediate results concurrent with the first function executing in the second direction on a second matrix of coefficients (column 11, line 58 to column 12, line 10).

Tanaka does not teach or suggest "executing a first one-dimensional inverse discrete cosine transforming function in a first direction" and "executing a second one-dimensional inverse discrete cosine transforming function in a second, different direction, in which the functions switch periodically and concurrently between the first and second directions" as in Applicant's amended claim 15. The DCT calculators 4 and 6 in Tanaka read and write in fixed directions, the DCT calculator 4 in the row direction and the DCT calculator 6 in the column direction. The calculators do not "switch periodically and concurrently between the first and second directions" as in Applicant's amended claim 15, and there is no teaching or suggestion otherwise in Tanaka.

For at least these reasons, Tanaka does not anticipate and would not have made obvious amended claim 15. Amended claim 19 includes limitations similar to claim 15 and is patentable for at least the same reason as for amended claim 15. Claims 16-17 and 20-21 depend on claims 15 and 19, respectively, and are patentable for at least the same reasons as for their respective independent claims.

6. Regarding claims 23 and 25, Tanaka discloses an apparatus/computer implementing a two-dimensional inverse discrete cosine transform, comprising: two one-dimensional inverse discrete cosine transform blocks (figure 11, elements 4 and 6); a memory bloc (figure 11, elements 2a and 2b); a sequencer block, the sequencer block alternately being in one of two states, each state indicating the direction each one-dimensional inverse discrete cosine transform block operates in (figure 11, elements 20 and 22; column 6, line 50-55); and an address generator block (figure 5, element 8; column 6, line 56-65).

Tanaka does not teach or suggest "a sequencer block, the sequencer block alternately being in one of two states, each state indicating the direction each one-dimensional inverse discrete cosine transform block operates in" as in Applicant's claim 23. In Tanaka, "the switching circuits 20 and 22 are switched such that the second one-dimensional orthogonal transformation calculator 6 is connected to one memory unit 2b (or 2a) when the first one-dimensional orthogonal transformation calculator 4 is connected to the other memory unit 2a (or 2b)." (col. 6, lines 50-55) Thus, the switching circuits 20 and 22 determine which block

functions read and write to which one of the memories 2a and 2b, not which direction the functions operate in as in Applicant's claim 23. Furthermore, the calculators 4 and 6 have fixed directions so the switching circuits 20 and 22 cannot switch their directions.

For at least these reasons, Tanaka does not anticipate and would not have made obvious claim 23. Claim 25 includes limitations similar to claim 23 and is patentable for at least the same reason as for claim 23. Claims 24 and 26 depend on claims 23 and 25, respectively, and are patentable for at least the same reasons as for their respective independent claims.

> **7. Regarding claim 27, Tanaka discloses a method of implementing a two-dimensional inverse discrete cosine transform, comprising: executing two one-dimensional inverse discrete cosine transforming functions to operate on a sequence of matrices, some matrices being operated on first in row order, then in column order and some matrices being operated on first in column order, then in row order (column 15, line 10-28).**

Tanaka does not teach or suggest "enabling the functions to each operate on matrices in row order and in column order" as in Applicant's amended claim 27. As explained above, the functions in Tanaka operate in single, fixed directions.

For at least these reasons, Tanaka does not anticipate and would not have made obvious amended claim 27.

Applicant's discussion of particular positions of the Examiner does not constitute a concession with respect to any positions that are not expressly contested by the Applicant. Applicant's emphasis of particular reasons why the claims are patentable does not imply that there are not other sufficient reasons why the claims are patentable. Applicant's amendment of the claims does not constitute a concession that the claims are not allowable in their unamended form.

Applicant asks that all claims be allowed. Please apply any other charges or credits to deposit account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: 4 March 2003

Christina Sperry
Reg. No. 47,106

Fish & Richardson P.C.
Attorneys for Intel Corporation
225 Franklin Street
Boston, Massachusetts 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

20568498.doc

Version with markings to show changes

In the claims:

Claims 18 and 22 have been cancelled.

Claims 15, 19, and 27 have been amended as follows:

15. (Amended) A method of implementing a two-dimensional inverse discrete cosine transform, comprising:

executing a first one-dimensional inverse discrete cosine transforming function in a first direction on a first matrix of coefficients to produce a matrix of intermediate results; and

executing a second one-dimensional inverse discrete cosine transforming function in a second, different direction on the matrix of intermediate results concurrent with the first function executing in the second direction on a second matrix of coefficients,

in which the functions switch periodically and concurrently between the first and second directions.

19. (Amended) A storage medium bearing a machine-readable program capable of causing a machine to:

execute a first one-dimensional inverse discrete cosine transforming function, where the first function executes in a first direction on a first matrix of coefficients, producing a matrix of intermediate results; and

execute a second one-dimensional inverse discrete cosine transforming function, where the second function executes in a second, different direction on the matrix of intermediate results concurrent with the first function executing in the second direction on a second matrix of coefficients,

in which the functions switch periodically and concurrently between the first and second directions.

27. (Amended) A method of implementing a two-dimensional inverse discrete cosine transform, comprising:

executing two one-dimensional inverse discrete cosine transforming functions to operate on a sequence of matrices, some matrices being operated on first in row order, then in column order and some matrices being operated on first in column order, then in row order; and

enabling the functions to each operate on matrices in row order and in column order.